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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,573

07/31/2003

Andrew Roman Gizara

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37598

7590

02/14/2005

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EXAMINER

RILEY, SHAWN

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/604,573	Applicant(s) GIZARA, ANDREW ROMAN	
	Examiner Shawn Riley	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 2005 amendment and remarks.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-13 and 15-21 is/are allowed.
- 6) ☒ Claim(s) 1 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Applicants amendments and remarks

Applicants amendments and remarks filed the 3 Feb 2005 have been carefully considered but not deemed persuasive vis a vis claims 1 and 14. Applicants have relied on 'open loop' digital control as a patentable aspect of the instant invention. Applicants point out that Rozsypal relies on an error amplifier (247) in a feedback path. Rozsypal also relies on a feedforward control via 226. Applicants have not shown their invention in a drawing. I.e., the use of the circuit with an open-loop configuration and show only a closed loop (see, e.g., applicants' figure 1)¹. Does this imply that it is not necessary to show an open-loop configuration because it is so well known that a picture would not be useful? In that case, as suggested in the below 103, this limitation does not provide a patentable distinction. Or would the description of the essence of the patentable invention necessitate adding new matter, wherein the included detail would be rejected as such. Either way, reliance on this aspect of applicants invention does has been deemed unpersuasive. For at least the above reasons, this action has been made final.

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

The abstract should not refer to purported merits (semiconductor die also exists a switch mode DC-DC voltage converter of the **highest efficiency**,) or speculative applications of the invention and should not compare the invention with the prior art.

¹Note that figure 6 is not seen as showing a complete circuit diagram that is useful for determining the invention since it contains no control signal drivers and no clear means of operation. Clearly figure 6 was used as a means to show the invention in general for the purpose of describing the

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Correction is required.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

2. Claims 1 and 14 are rejected under 35 U.S.C. § 103 as being unpatentable over Rozsypal (U.S. Patent 6,781,353) in view of Masaki (U.S. Patent 4,988,923) and further in view of Herbert (U.S. Patent 5,132,606). The Rozsypal reference discloses the limitations of the invention as claimed including: An integrated circuit package comprising, a semiconductor die of plural separate power supply voltage domains (e.g., $V_{BATT}/V_{OUT}/V_{REF}$ etc.); a switch mode DC-to-DC

method of derivation of the governing equations.

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converter (see, e.g, figure 2 element 104) including at least: a power switching transistor (S_1/S_2), and an output voltage fixing circuit (control circuit of comprising 250/230/221/246/etc.).

However, Rozsypal does not show an inductor having a core. Masaki shows (see Figure 8) an inductor having a core. It would have been obvious at the time the invention was made to utilize an inductor having a core of Masaki into the circuit of Rozsypal for the reason of a design choice wherein the use of an inductance is commonly used to change the overall impedance of a system to change the charging/discharging time of energy stored therein. See for example figure 8 of Masaki wherein the designer contemplates which type of inductance (with/without a core) would be most beneficial overall to the circuit. See column 3 line 29-38 of Masaki. Further, it would have been obvious at the time the invention was made to utilize, in controlling the input modulator a digital open loop controller for the reason that feed forward (such as used in Rozsypal (226) control can be used to minimize the need for feed-back and further since Feed forward control is essentially open loop control. And also, the methods of control are not limited to any specific implementation or embodiment, and could be designed with analog circuits, digital circuits or a combination of the two. See, e.g., Herbert column 11 lines 21-26 and column 20 lines 40-45, e.g..

As to claim 8 and likewise 14,

the Rozsypal and Masaki reference disclose the limitations of the invention as claimed as described above. However, Rozsypal and Masaki do not show a substrate of fiberglass resin epoxy of type FR4 based laminate material for mounting said DC-to-DC Converter

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components. It would have been obvious at the time the invention was made to utilize the a substrate of fiberglass resin epoxy of type FR4 based laminate material for mounting said DC-to-DC Converter components into the circuit of Rozsypal and Masaki since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

3. Claims 4-13 and 15-21 are allowable over the prior art of record.
4. As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 C.F.R. § 1.111(b) and section 707.07(a) of the M.P.E.P.

Conclusion

Any inquiry from other than the applicant/attorney of record concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197. Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Mike Sherry who can be reached at 571.272.2084. Any inquiry about a case's location, retrieval of a case, or receipt of an

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amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent to fax number 703.872.9306. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center).

February 05



Shawn Riley
Primary Examiner